Montana Board of Oil and Gas Conservation
Environmental Assessment

Operator: Newfield Production Company
Well Name/Number: Anderson 37-10-10-1H
Location: SE SE Section 10 T37N R10W
County: Glacier **, MT; Field (or Wildcat)** W/C

Air Quality

(possible concerns)
Long drilling time: 15 to 30 days drilling time.
Unusually deep drilling (high horsepower rig): No, triple derrick drilling rig to drill a vertical pilot hole to 8,031'TD in the Devonian Nisku Formation. Plugged back with cement and drill a 12,222'MD/7843'TVD single lateral in a Devonian Potlatch Formation.
Possible H2S gas production: Possible H2S.
In/near Class I air quality area: Yes, Class I air quality area, Blackfeet Reservation.
Air quality permit for flaring/venting (if productive): Yes, DEQ air quality permit required under 75-2-211.

Mitigation:
X Air quality permit (AQB review)
__ Gas plants/pipelines available for sour gas
__ Special equipment/procedures requirements
__ Other:_____

Comments: Triple derrick drilling rig to drill a vertical pilot hole to 8,031'TD in the Devonian Nisku Formation. Plugged back with cement and drill a 12,222'MD/7843'TVD single lateral in a Devonian Potlatch Formation.

Water Quality

(possible concerns)
Salt/oil based mud: Use freshwater and freshwater mud system on drilling surface, main vertical pilot hole and horizontal lateral.
High water table: No high water table anticipated.
Surface drainage leads to live water: Yes, unnamed ephemeral tributary drainages, about ¼ of a mile to the west and 3/8 of a mile to the northeast from this location.
Water well contamination No, closest water well is about ¾ of a mile to the northeast from this location. Surface casing hole will be drilled with freshwater and freshwater drilling fluids to 1000' and steel surface casing run and cemented to surface to protect groundwater.
Porous/permeable soils: Yes, sandy silty soils.
Class I stream drainage: Closest Class I stream drainage is the Milk River, about 4.5 miles to the southeast from this location.

Mitigation:
X Lined reserve pit
X Adequate surface casing
__ Berms/dykes, re-routed drainage
__ Closed mud system
__ Off-site disposal of solids/liquids (in approved facility)
__ Other: _____

Comments: 1000' of surface casing cemented to surface adequate to protect freshwater. Also, fresh water drilling fluid system to be used on surface hole intermediate string hole and horizontal lateral.

Soils/Vegetation/Land Use

(possible concerns)
Steam crossings: None anticipated.
High erosion potential: No, small cut, up to 1.3' and small fill required up to 2.5', required.
Loss of soil productivity: No, location will be restored after drilling, if nonproductive. If productive unused portion of drillsite will be reclaimed.
Unusually large wellsite: No, large, 400'X300' location size required.
Damage to improvements: Slight, surface use is cultivated fields.
Conflict with existing land use/values: Slight

Mitigation
__ Avoid improvements (topographic tolerance)
__ Exception location requested
X Stockpile topsoil
__ Stream Crossing Permit (other agency review)
X Reclaim unused part of wellsite if productive
__ Special construction methods to enhance reclamation
__ Other _____

Comments: Using existing county road, Boundary Road and Herron Road. Access off existing county road, approximately 1/4 of a mile of new road will be constructed/upgraded into this location. Cuttings will buried in the lined reserve pit. Drilling fluids will be allowed to dry in the lined pit. Pit will be backfilled when dry. No special concerns

_____

Health Hazards/Noise

(possible concerns)
Proximity to public facilities/residences: Closest residence is about 1 3/8 miles to the north from this location.
Possibility of H2S: Possible H2S.
Size of rig/length of drilling time: Triple derrick drilling rig 30 to 40 days drilling time.

Mitigation:
X Proper BOP equipment
__ Topographic sound barriers
__ H2S contingency and/or evacuation plan
__ Special equipment/procedures requirements
__ Other:_____

Comments: No concerns, proper BOP stack and surface casing should be able to control any problems that occur.

Wildlife/recreation

(possible concerns)
Proximity to sensitive wildlife areas (DFWP identified): None, identified
Proximity to recreation sites: None identified.
Creation of new access to wildlife habitat: No
Conflict with game range/refuge management: No

Threatened or endangered Species: Species identified as threatened or endanger in Glacier County are Grizzly Bear, Canada Lynx and Bull Trout. Candidate species are the Wolverine, Sprague's Pipit, Whitebark Pine and the Meltwater Lednian Stonefly**.** NH tracker website lists 0 species of concern.

Mitigation:

__ Avoidance (topographic tolerance/exception)

__ Other agency review (DFWP, federal agencies, DSL)

__ Screening/fencing of pits, drillsite

__ Other: _____

Comments: Private cultivated surface lands. There maybe species of concern that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to what he would like done, if a species of concern is discovered at this location. The Board of Oil & Gas has no jurisdiction over private surface lands.

Historical/Cultural/Paleontological

(possible concerns)

Proximity to known sites None identified

Mitigation

__ avoidance (topographic tolerance, location exception)

__ other agency review (SHPO, DSL, federal agencies)

__ Other:_____

Comments: Private cultivated surface lands. There maybe possible historical/cultural/paleontological sites that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to his desires to preserve these sites or not, if they are found during construction of the wellsite. The Board of Oil & Gas has no jurisdiction over private surface lands.

Social/Economic

(possible concerns)

__ Substantial effect on tax base

__ Create demand for new governmental services

__ Population increase or relocation

Comments: Wildcat well, until production is established no social/economic concerns can be evaluated.

Remarks or Special Concerns for this site

Well will be drilled as a vertical pilot hole to 8,031'TD in the Devonian Nisku Formation to determine shows and establish formation depth. Well will be plugged back with cement and drill a 12,222'MD/7843'TVD single lateral in a Devonian Potlatch Formation.

Summary: Evaluation of Impacts and Cumulative effects

No long term impacts expected. Some short term impacts will occur.

I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the

human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC): \s\Steven Sasaki
(title:) Chief Field Inspector
Date: December 3, 2011

Other Persons Contacted:

Montana Bureau of Mines and Geology, GWIC website
(Name and Agency)
Glacier County water wells
(subject discussed)
December 3, 2011
(date)

US Fish and Wildlife, Region 6 website
(Name and Agency)
ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES
MONTANA COUNTIES, Glacier County
(subject discussed)

December 3, 2011
(date)

Montana Natural Heritage Program Website
(Name and Agency)
Heritage State Rank= S1, S2, S3 T37N R10W
(subject discussed)

December 3, 2011
(date)

If location was inspected before permit approval:
Inspection date: _____
Inspector: _____
Others present during inspection: _____